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# EUROPEAN PATENT APPLICATION

21 Application number: 85302332.3

51 Int. Cl.: A 47 C 3/02

22 Date of filing: 03.04.85

30 Priority: 10.04.84 JP 70057/84

43 Date of publication of application:  
13.11.85 Bulletin 85/46

84 Designated Contracting States:  
AT BE CH DE FR GB IT LI LU NL SE

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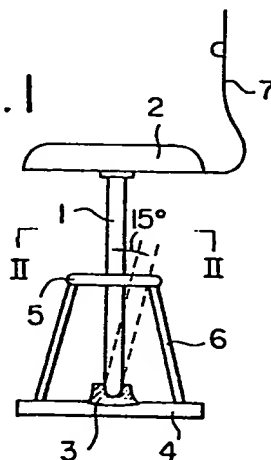
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54 Supporting apparatus of a seat of a chair.

57 This invention relates to a supporting apparatus of a seat (2) of a chair in order to be able to sit on the seat keeping the backbone in a state of proper posture when one sits on it, and the chair is constructed in that the supporting leg (1) fixed under the seat (2) is stably supported on a pedestal (4) and does not incline over an angle more than 15° by means of retaining device.

FIG. 1



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The present invention relates to a supporting apparatus of a seat of a chair for furniture or business, and more particularly to a supporting apparatus of a seat on which one must sit straight at the same time when he always keeps the backbone of his body at a normal position, and it is useful to improve the condition of one's health.

Up to this time, in a chair for furniture or business, except an easy chair and a rocking chair, it is ordinary that the seat keeps balance, and the seat cannot but transform and move in a extent that the seat rotates or a inclination of a back of a chair is done in a case of being provided with it. And when one sits on such a chair, his body becomes stable in obedience to the condition of the chair and he does not need his force to hold that state. When one sits on the chair, to hold the backbone straightly is necessary not to set up lumbago and the like, but as in case one sits on the existing chair, one can sit on keeping equilibrium even in an improper posture to a certain extent, one is apt to assume an improper posture. This invention has been done to offer a supporting apparatus of a seat of a chair on which seat one must sit keeping always in a proper posture.

According to this invention to be intended to eliminate the fault above mentioned, when one sits on the seat and holds his backbone in a proper posture, one

supporting leg supports the seat in a proper posture, and when one's posture is changed, said supporting leg would move, and the equilibrium would be lost, and therefore, feeling for sitting become unpleasant, so that one returns  
5 his posture in a proper position, and then he needs not force to keep his body to the proper posture. An angle of inclination of one supporting leg of the seat increases, the chair would fall down. In order to prevent this falling down, there is provided means for retaining the supporting  
10 leg not to incline over an angle more than 15°.

Consequently, the supporting apparatus of the seat of the chair according to this invention is characterized in that an extreme point of one supporting leg fixed on the lower surface of the seat of a chair is rotatable in  
15 a bearing portion of a pedestal and there is provided with means to prevent an angle of an inclination of the leg to become more than 15°.

Other features and advantages of the present invention are set forth in or apparent from the detailed  
20 description of a preferred embodiments of the invention found hereinbelow.

Figure 1 is a side view of a chair constructed in accordance with a preferred embodiment of the invention;

Figure 2 is a plane view sighted along a line II-II  
25 of Figure 1;

Figure 3 is a schematic diagram of the chair of the

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invention in use with a man;

Figure 4 is a cross sectional view of a portion of a chair constructed with the other embodiment of the invention;

5        Figure 5 is a similar diagram of Figure 1 of a chair constructed in accordance with a further embodiment of the invention, and

Figure 6 is a perspective view of the chair shown in Figure 5.

0        Referring to Figures 1 and 2, there is shown a front view and a plan view of the chair of the present invention, the extreme point of one supporting leg 1 which is fixed on a center portion of a lower surface of the seat 2, is freely put in a bearing part 3 provided on a center of the upper surface of the pedestal 4. A circular ring 5 is supported on said pedestal 4 by plural supporting rods 6. Said circular ring 5 has a function that said supporting leg 1 is prevented from inclining at an angle of more than 15° centering around said bearing portion 3.

0        In the drawings numeral 7 represents the back of a chair.

Figure 3 shows in the schematic diagram that when one sits down on the chair according to the present invention, his backbone and legs are in a normal state.

5        Figures 4 and 5 are representing other embodiments of means which prevents said supporting leg from inclining

at an angle more than  $15^{\circ}$ . In Figure 4, the extreme point of the supporting leg 1 is formed in a shape of globular form 8, and which is put in a hemispherical open space provided on the bearing portion 3 of the pedestal 4 and  
5 covered with a stop metal fittings 9. By means of an opening 10 provided appropriately on said fittings 9, the inclination of the supporting leg 1 will be limited. In Figure 5, the hemispherical open space is provided on a metal fittings 11 inserted into a short tube 12 which is  
10 fixed on the center of the pedestal 4', and on which a hemispherical extreme point 8' of the supporting leg 1' is put, and a stop metal fittings 9' is fixed on said short tube 12 by screw. As a constricted portion 13 passes through the opening 10' of said fittings 9', the inclination  
15 of said supporting leg 1' will be limited in order not to exceed an angle more than  $15^{\circ}$ .

The fact hereafter mentioned is not concerning of the construction according to the present invention, it is better to make able to adjust the height of the seat  
20 2' by means of that a screwed rod 14 fixed on the lower surface of said seat 2' is screwed in the upper end free leg 1', and said leg 1' is turned relatively to the seat 2' by a handle 15. Furthermore, it is better to provide a cover 16 made by elastic material e.g., a plastic material,  
25 around the leg 1' and a metal fittings 9' for good outwards appearance and protection. Figure 6 represents

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a perspective view of the chair shown in Figure 5.

In the embodiment represented in Figures 1 and 2, the chair cannot be moved by holding the seat in one's hands, but in the embodiments represented in Figures 4 and 5, it can be done.

CLAIMS

1. Supporting apparatus of a seat of a chair in which an extreme point of one supporting leg fixed on the lower surface of a seat of a chair is rotatable in a bearing part of a pedestal and there is provided with means to prevent an angle of an inclination of the leg to become more than  $15^{\circ}$ .

2. Supporting apparatus according to Claim 1 in which the means to prevent an angle of an inclination of the leg to be more than  $15^{\circ}$  is a ring supported to the pedestal.

3. Supporting apparatus according to Claim 1 in which the means to prevent an angle of an inclination of the leg to be more than  $15^{\circ}$  is a stop metal fittings which holds the extreme point on the pedestal.

FIG. 1

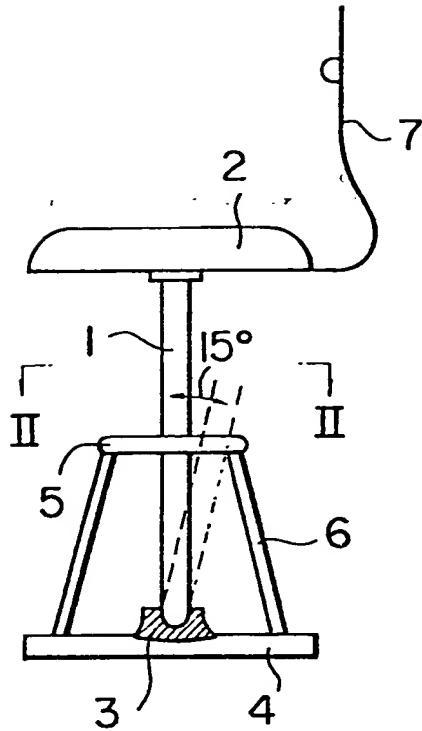


FIG. 2

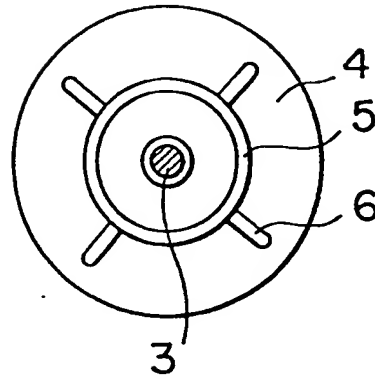


FIG. 3

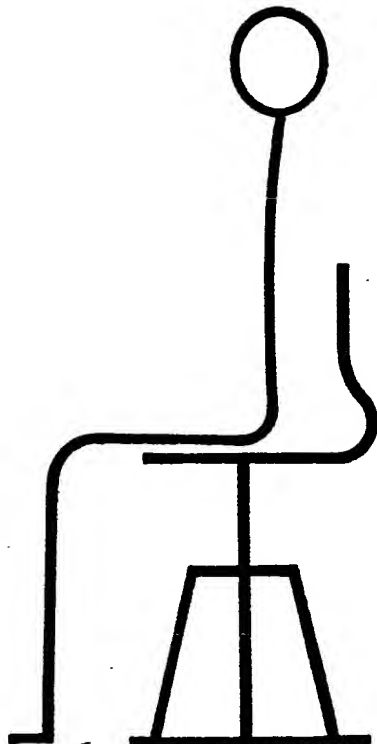


FIG. 4

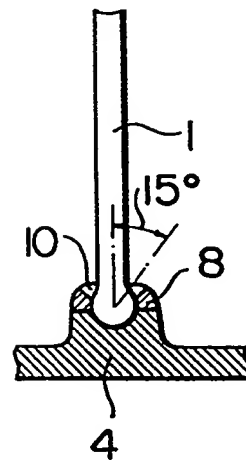


FIG. 5

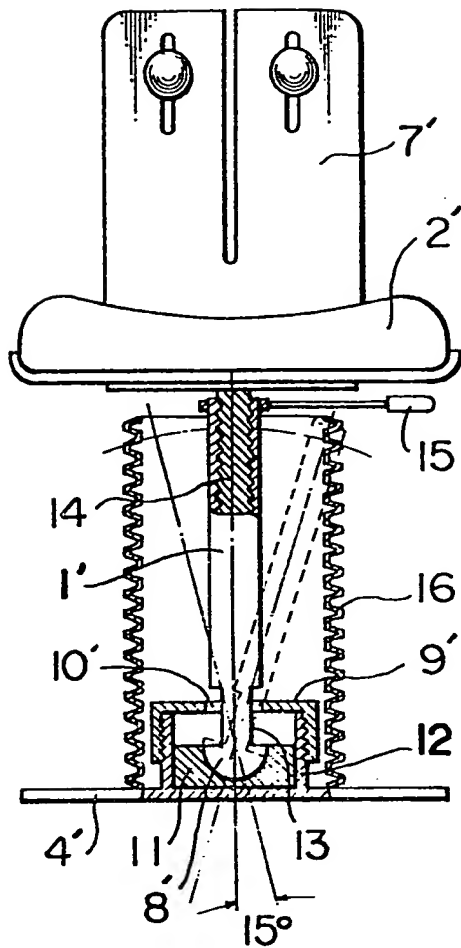
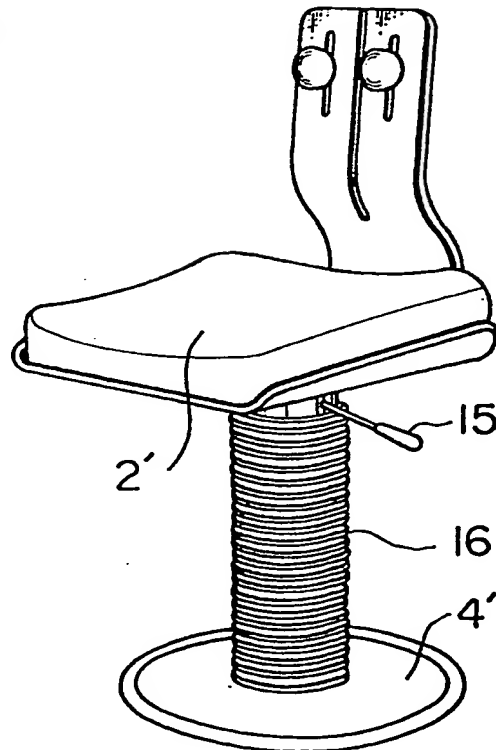


FIG. 6





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# EUROPEAN SEARCH REPORT

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EP 85 30 2332

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	GB-A- 23 582 (EVERY) * Figures 1,2; page 2, lines 5-13 *	1,3	A 47 C 3/02
X	--- US-A-4 099 697 (VON SCHUCKMANN) * Figures 1,2; column 1, lines 36-49; claim 1 *	1	
A	--- US-A-2 862 710 (LEWIS) * Figures 1,5,6-9; column 5, lines 14-17; column 4, lines 36-50 *	1-3	
A	--- US-A-3 432 193 (OXFORD) * Figures; column 1, lines 25-31 * -----	1-3	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			A 47 C A 63 G
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 05-07-1985	Examiner MYSLIWETZ W.P.
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	